

# **ABSTRACT OF THE DISCLOSURE**

A ladder filter includes multiple inductor sections, each including voltage-controlled current sources and capacitors. A second signal input terminal is provided for the  
5 filter separately from an ordinary signal input terminal and a signal, which has been input through the second terminal, is supplied to one of the voltage-controlled current sources by way of a gain calculator. By adjusting the gain obtained by the gain calculator to an appropriate value, the ladder  
10 filter can make the numerator of its transfer function freely definable.